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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,712

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Jean-Michel Cazenave

Serie 6353

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7590

09/15/2009

AIR LIQUIDE

Intellectual Property

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HOUSTON, TX 77056

EXAMINER

SPORER, ERIC NOLAN

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

09/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,712	Applicant(s) CAZENAVE ET AL.	
	Examiner ERIC SPORER	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to the amendment filed on 18 June 2009. As directed by the amendment: claims 6-7 have been amended. Thus, claims 6-10 are presently pending in this application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6, 7 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Beale (US Pat. 4,648,397).

Regarding claim 6, Beale discloses a circuit for supplying oxygen to aircraft passengers, comprising, a first pressure sensor 66 adapted to measure a pressure (mask pressure) in a cabin of the aircraft (pilot's mask being in pilot's cabin); a second pressure sensor adapted to measure pressure of a pressurized oxygen source; and in a line supplying oxygen connected to a pressurized oxygen source downstream of said second pressure regulator, a servo controlled pressure regulator 60 (Col. 6, Lines 15-16) that can be actuated in response to a pressure control signal supplied by an electronic control unit 50 (Fig. 1, Col. 3 Lines 37-40) based upon signals indicative of pressures sensed by the pressure sensors (see controller 50 of Fig. 2). Beale does not disclose wherein the second pressure sensor is in a line supplying oxygen connected to a pressurized oxygen source. Beale instead discloses the second pressure sensor at

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the air supply. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the second pressure sensor in the line connected to the oxygen supply for the purpose providing a single pressure sensor that can be used with multiple supplies, and for the purpose of measuring inlet pressure to the regulator while accounting for line pressure drop, since it has been held that rearranging parts of an invention involves only routine skill in the art.

3. Regarding claim 7, Beale further discloses a cabin pressure sensor 66 (pressure sensor located in the pilot's cabin, Fig. 1) delivering an absolute pressure signal P1 (Fig. 1) to the electronic control unit 50 (Fig. 1) for the generation of said control signal to the regulator 60 (Fig. 1, Col. 3 Lines 32-40). The cabin pressure sensor is disclosed as measuring "the suction pressure" (Col. 2 Lines 24-25), which is an absolute pressure value. Furthermore, should the pressure signal not be viewed as absolute, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the pressure signal to be absolute for the purpose of accounting for atmospheric pressure.

4. Regarding claim 9, Beale further discloses that the oxygen supply line A12 (Fig. 1) comprises a downstream connection to an oxygen therapy system 64 (Pilot's Mask, Fig. 1).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beale as applied to claim 7 above, and further in view of Babin (US Pat. 6,588,442).

6. Regarding claim 8, Beale discloses the disclosed invention except where it comprises a line bypassing the regulator and provided with a safety solenoid valve.

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Babin, however, teaches the use of a line 22 (bypass chamber, Fig. 2) bypassing the regulator 38 (valve member, Fig. 2) and provided with a safety solenoid valve 52 (solenoid actuator, Fig. 2), in order to provide emergency bypass in the event of the rotary valve actuator or power failure with the rotary valve in the closed position (Col. 2 Lines 6-9). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the circuit disclosed by Beale to comprise a line bypassing the regulator and be provided with a safety solenoid valve, as taught by Babin, for the purpose of providing emergency bypass in the event of the rotary valve actuator or power failure with the rotary valve in the closed position.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beale as applied to claim 7 above, and further in view of Danon (US Pat. 5,701,889).

8. Regarding claim 10, Beale discloses the claim invention except wherein the oxygen source comprises at least one pressurized oxygen cylinder. Beale discloses the oxygen source 74 is pressurized (Col. 4 Lines 67-68), but does not disclose that it is stored in a cylinder. Danon, however, teaches the use of an oxygen source 160 (Fig. 12) comprising a pressurized oxygen cylinder as a suitable source of oxygen for an oxygen breathing controller 10 (Fig. 12) of an aircraft. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the pressurized oxygen source of Beale to be a cylinder, as taught by Danon, in order to provide a suitable source of oxygen for an oxygen breathing controller of an aircraft.

Response to Arguments

9. Applicant's arguments filed 18 June 2009 have been fully considered but they are not persuasive.

10. Regarding applicant's arguments that Beale does not disclose a pressure sensor in the line between the oxygen supply and the mask, this is a mere rearrangement of disclosed parts. It is the examiner's position that it would have been obvious to make this modification, as it is well known to put pressure sensors downstream pressure supplies in the supply line, so that the pressure supply can be easily swapped out without removing the pressure supply from the line, and to allow for the use of multiple supplies.

11. Regarding applicant's arguments that Beale does not disclose a sensor that delivers an absolute pressure signal, it is the examiner's position that Beale discloses this limitation. The cabin pressure sensor is disclosed as measuring "the suction pressure" (Col. 2 Lines 24-25), which is an absolute pressure value. Furthermore, a signal is defined as "a modulation of an electric current, electromagnetic wave, or the like by means of which information is conveyed from one place to another; the current or wave itself; also, a current or wave whose presence is regarded as conveying information about the source from which it comes." ("signal, *n*" The Oxford English Dictionary. 2nd ed. 1989. It is the examiner's position that should Beale's signal be viewed as a gauge pressure signal, it still conveys absolute pressure information about the source from which it comes, that information being the exact absolute pressure value plus the atmospheric pressure. Furthermore, should the pressure signal not be

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viewed as absolute, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the pressure signal to be absolute for the purpose of accounting for atmospheric pressure.

12. Regarding applicant's argument's regarding claims 8 and 10, it is the examiner's position that the limitations not disclosed by Beale are taught by both Babin and Danon respectively as stated in the office action above.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC SPORER whose telephone number is 571-270-7834. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571)272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ERIC SPORER/
Examiner, Art Unit 3753

/Robin O. Evans/
Supervisory Patent Examiner, Art Unit 3753